AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all previous listings and versions of claim in this application.

Claims 1-128. (cancelled)

129. (New) An applicator for applying a solution containing an effective amount of at least one protease to a skin portion of a subject for treatment thereof, comprising:

a body member having an open end defining an annular surface to be brought into contact with the skin portion to thereby define a confined space therewith;

at least one inlet into the body member communicating with the confined space via a first passageway for applying the protease solution to the skin portion within the confined space;

at least one outlet from the body member communicating with the confined space via a second passageway through the body member for outletting therefrom the protease solution after applied to the surface of the object within the confined space; and

a source of the protease solution to be inletted via the inlet and to be streamed into and out of contact with the skin portion of the subject for enzymatically and mechanically removing cells therefrom.

130. (New) The applicator of claim 129, wherein the body member is a housing having an open end mounting a head carrying a flexible skirt of plastic material formed with an annular rim to contact the skin portion to be treated; the head being threadedly mounted on the housing to permit axial adjustment of the distance between the annular rim of the skirt, and at least one of the passageways, to accommodate irregularities in the surface of the skin portion to be treated.

131. (New) The applicator of claim 130, wherein the flexible skirt is of conical configuration, and the annular rim is an out–turned rim to enhance its contact with the surface of the skin portion to be treated.

132. (New) The application of claim 129, wherein the body member includes a conduit extending through the body member; the conduit having an open end in the confined

space, and an opposite end communicating with the inlet or outlet such that the interior of the conduit defines one of the passageways, and an annular space between the conduit and the body member defines the other of the passageways.

133. (New) The applicator of claim 132, wherein the opposite end of the conduit communicates with the outlet such that the interior of the conduit defines the second passageway communicating with the outlet, and the annular space between the conduit and the body member defines the first passageway communicating with the inlet port.

134. (New) The applicator of claim 129, wherein the applicator further comprises a collector communicating with the outlet port for collecting the solution after contact with the skin portion to be treated, and for separating from the solution cells removed from the skin portion by the solution.

135. (New) The applicator of claim 129, wherein the applicator further comprises a heater or cooler for heating or cooling the protease solution before inletted into the inlet.

136. (New) The applicator of claim 129, wherein the applicator further comprises a cell collector communicating with the outlet for collecting the protease solution after streamed into and out of contact with the skin, and for separating therefrom the cells removed from the skin.

137. (New) The applicator of claim 129, wherein the source comprises a first reservoir in fluid communication with the at least one inlet, the first reservoir containing the protease solution.

138. (New) The applicator of claim 137, further comprising a pump that is operatively connected between the first reservoir and the at least one inlet for effecting the streaming of the solution in the first reservoir to the at least one inlet

139. (New) The applicator of claim 137, wherein the first reservoir is arranged to direct, by gravitation, the solution towards the at least one inlet.

140. (New) The applicator of claim 137, further comprising a thermoregulator that is operatively connected between the first reservoir and the at least one inlet.

141. (New) The applicator of claim 137, further comprising a mixer that is operatively connected between the first reservoir and the at least one inlet.

142. (New) The applicator of claim 137, further comprising a filter that is operatively connected to the first reservoir and the at least one inlet.

143. (New) The applicator of claim 137, further comprising a cell collector that is operatively connected to the at least one outlet, wherein the collector is arranged to receive the solution and the removed cells, cellular debris and tissue debris from the inlet.

144. (New) The applicator of claim 143, wherein the cell collector further comprises a filter for collecting the removed cells from the skin portion of the subject.

145. (New) The applicator of claim 143, wherein the cell collector further comprises a continuous flow centrifuge for collecting the removed cells from the skin portion of the subject.

146. (New) The applicator of claim 137, wherein the first reservoir contains the protease solution wherein the at least one protease is substantially catalytically inactive.

147. (New) The applicator of claim 146, wherein the solution contains at least one protease selected from the group consisting of papai, bromelain, vibriolysin, krill protease, chymotrypsin, trypsin, collagenase, elastase, dipase, proteinase K, Clostridium multifunctional protease and Bacillus subtilis protease.

148. (New) The applicator of claim 146, wherein the solution contains a single protease.

149. (New) The applicator of claim 146, wherein the solution contains a plurality of proteases.

150. (New) The applicator of claim 146, wherein the solution further contains an effective amount of at least one substance selected from the group consisting of: a local anesthetic, a coagulant and an anti–coagulant.

151. (New) The applicator of claim 150, wherein the solution further contains an effective amount of an antibiotic.

152. (New) The applicator of claim 137, further comprising a second reservoir that is operatively connected to the first reservoir, wherein the second reservoir is adapted for containing means capable of activating the at least one protease.

153. (New) The applicator of claim 152, wherein the second reservoir is constructed from glass, metal or plastic.

154. (New) The applicator of claim 152, wherein the first reservoir contains the protease solution wherein the at least one protease is substantially catalytically inactive and the second reservoir contains means for activating the at least one protease of the first reservoir.

155. (New) The applicator of claim 137, wherein (a) the first reservoir contains the protease solution wherein the at least one protease is present in a substantially catalytically inactive form; and wherein the applicator further comprises; (b) a first receptacle for receiving the first reservoir; (c) a second reservoir containing a protease activating solution for activating catalytic activity of the at least one protease upon mixing with the first solution; (d) a second receptacle for receiving the second reservoir; and (e) a mixing chamber in fluid communication with the first and second reservoirs when received by the first and second receptacles, for mixing the first solution and the activating solution such that the at least one protease becomes catalytically active in solution.

156. (Previously presented) The applicator of claim 155, wherein the mixing chamber includes a mixing mechanism for mixing the at least one protease and the activating solution such that the at least one protease becomes catalytically active in solution.

157. (New) A method for treating a skin portion of a subject afflicted with a dermatological lesion, which comprises:

producing a solution containing an effective amount of at least one protease; and

directing the solution in the form of a stream into and out of contact with the skin portion such that the protease solution stream enzymatically and mechanically removes cells from the skin portion.

158. (New) The method of claim 157, wherein the method further comprises: collecting the removed cells from the solution after streamed into contact with the skin portion.

159. (New) The method of claim 157, wherein:

the stream is directed into contact with the skin portion via an inlet in a body member brought into contact with the skin to define a confined space with the skin communicating with the inlet via a first passageway through the body member; and

the solution stream, with the cells removed thereby from the skin portion, are directed away from the skin portion via an outlet from the body member communicating with the confined space via a second passageway through the body member.

160. (New) The method of claim 159, wherein the open end of the body member is of a flexible plastic material effective to accommodate irregularities on the surface of the object to be treated and to seal the confined space.

161. (New) The method of claim 160, wherein the body member is a housing having an open end mounting a head; and the flexible plastic material is in the form of a flexible skirt of plastic material carried by the head and formed with an annular rim to contact the surface of the skin portion to be treated; the head being threadedly mounted on the housing to permit axial adjustment of the distance between the annular rim of the skirt, and at least one of the passageways in order to accommodate irregularities in the skin portion to be treated.

162. (New) The method of claim 161, wherein the flexible skirt is of conical configuration, and the annular rim is an out–turned rim to enhance its contact with the skin portion to be treated.

163. (New) The method of claim 157, wherein at least one protease is selected from the group consisting of papain, bromelain, plasminogen activator, plasmin, mast cell protease, lysosomal hydrolase, streptokinase, pepsin, vibriolysin, krill protease, chymotrypsin, trypsin, collagenase, elastase, dipase, proteinase K, Clostridium multifunction protease and Bacillus subtilis protease.

164. (New) The method of claim 157, wherein the solution contains a single protease.

165. (New) The method of claim 157, wherein the solution contains a plurality of proteases.

166. (New) The method of claim 157, wherein the solution further contains an effective amount of at least one substance selected from the group consisting of: a local anesthetic, a coagulant and an anti–coagulant.

167. (New) The method of claim 157, wherein the solution further contains an effective amount of antibiotic.

168. (New) The method of claim 157, wherein the at least one protease is activated shortly prior to the streaming of the protease solution over and in contact with, the skin portion.

169. (New) The method of claim 168, wherein the at least one protease is activated by (a) maintaining the at least one protease at a first temperature in which the at least

one protease is substantially catalytically inactive and then changing the first temperature to a second temperature at which the at least one protease is catalytically active; (b) providing the at least one protease in a powder form and mixing the powder with a solution to which the at least one protease becomes catalytically active; or (c) providing the at least one protease in a first solution in which the at least one protease in substantially catalytically inactive and mixing the first solution with a second solution so as to achieve a mixed solution in which the at least one protease is catalytically active.

170. (New) The method of claim 169, wherein the mixed solution differs from the first solution by at least one parameter selected from the group consisting of pH, ion concentration, free metal concentration, hydrophilicity and hydrophobicity.

171. (New) The method of claim 158, wherein collecting the removed cells is effected via filtration.

172. (New) The method of claim 158, wherein collecting the removed cells is effected via continuous flow centrifugation.